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NASA Procedural Requirements

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Subject: NASA Technology Commercialization Process w/ Change 1 (4/9/04)

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CHAPTER 1. Technology Commercialization Policy Overview

1.1 National Policy

1.1.1 In today's increasingly competitive global economic climate, the United States must ensure that its technological resources are fully utilized throughout the economy. Executive Order 12591 states: "The head of each Executive Department and Agency, to the extent permitted by law, shall encourage and facilitate collaboration among Federal laboratories, State and local governments, universities, and the private sector, particularly small business, in order to assist in the transfer of technology to the marketplace."

1.1.2 To ensure that NASA's existing and future technological assets contribute to U.S. economic growth, it is critical that they are quickly and effectively translated into improved production processes and marketable, innovative products. Accomplishing these objectives requires the Agency to develop new ways of doing business and new ways of measuring its progress.

1.2 NASA Policy

1.2.1 It is NASA policy to actively pursue technology commercialization and impart, to the maximum extent possible, the benefits of its technological assets to improve the

national economy. NASA's Strategic Plan (NPD 1000.1) and Technology Commercialization Policy (NPD 7500.2) recognize the importance of the commercial technology mission and view commercialization as being as important as any mission in the Agency. The NASA Program and Project Management Processes and Requirements Document (NPR 7120.5), states that programs and projects will strive to enable the use of NASA technology by a U.S. firms for commercial application. NPD 7500.2, paragraph 1.a expands this requirement to include other NASA activities whose planned or existing technological assets (innovations, technologies, facilities and expertise) have commercial potential. In this document, we will refer to all NASA programs, projects, and technological assets simply as NASA "activities."

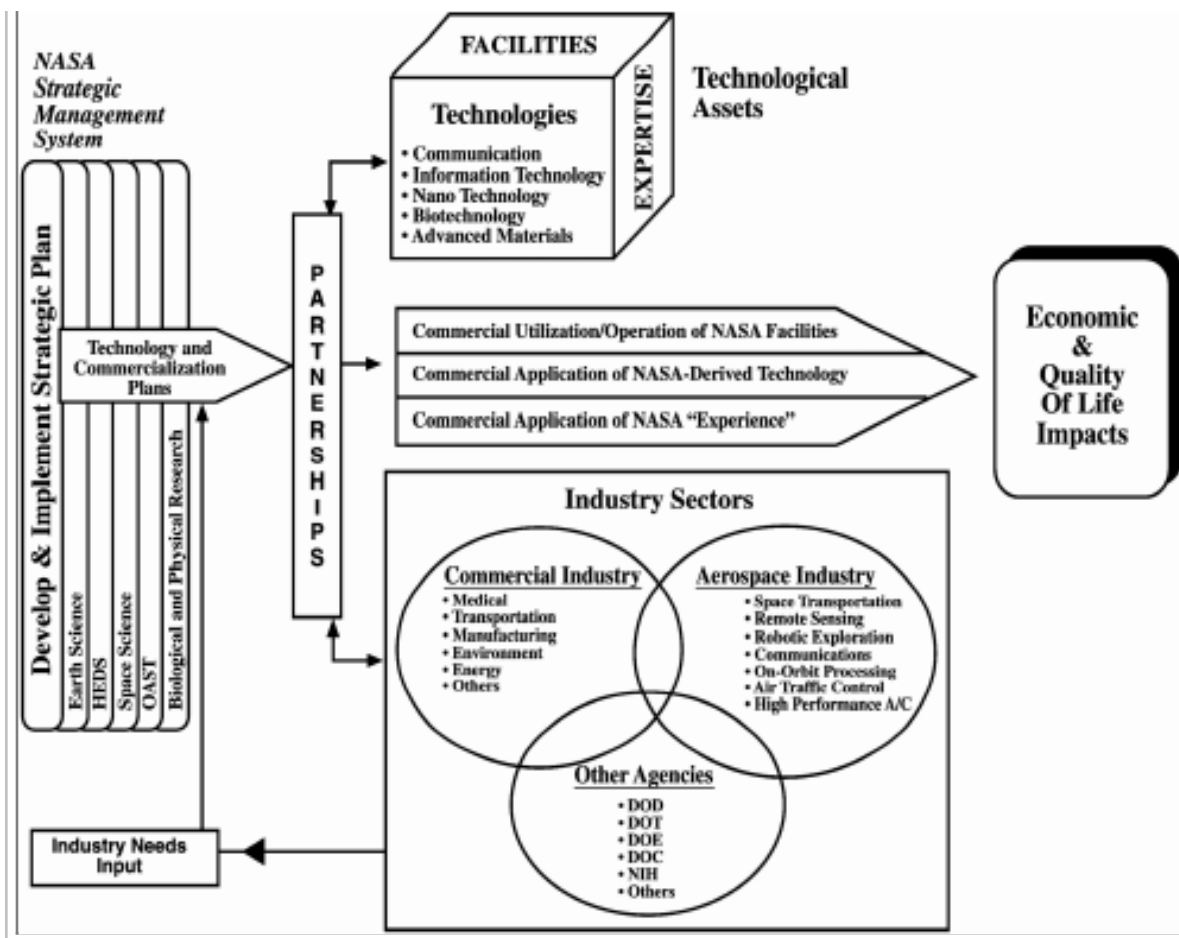
1.2.2 NASA's Technology Commercialization Policy (NPD 7500.2) establishes the cornerstones for NASA's technology commercialization as follows:

- a. Devoting 10 to 20 percent of its annual fiscal year research and development activity to commercial technology partnerships with the private sector;
- b. Requiring NASA activities whose planned or existing technological assets (technologies, innovations, facilities and expertise) have technology commercialization potential to emphasize commercial technology partnerships with U.S. industry from their onset and throughout their life cycle and that technology commercialization plans be required in all NASA activities which have commercial potential;
- c. Developing NASA aerospace technologies in commercial technology partnerships, and applying NASA technological assets in nonaerospace and aerospace markets which can result in economic benefits to the U.S. economy or to the quality of life;
- d. Expanding the participation of small disadvantaged, and women-owned small businesses in its commercial technology programs; and
- e. Utilizing NASATechTracS as the Agencywide commercial technology information system.

1.3 Strategic Overview

1.3.1 Figure 1-1 provides a strategic overview of the NASA technology transfer and commercialization mission. Specifically, it shows how commercial technology partnerships combine both innovative technological assets and partners to achieve economic and/or quality of life impacts. Each Enterprise's strategic plan shall clearly identify technology commercialization as a priority goal and objective. Early technology commercialization planning by the Enterprises to address industry needs, is essential to effective commercial technology partnerships.

Figure 1-1 Strategic Overview of NASA's Technology Commercialization Mission.



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1.3.2 Several important themes recur throughout this document that embody the principles for executing an effective technology commercialization process. In general, responsibilities for technology commercialization within NASA are stated in [NPD 7500.2](#), Section 5 and in [NPR 7120.5](#), Sections 2 and 3. They are as follows:

- a. NASA programs/projects shall conduct early planning for commercialization. At the onset of the formulation phase, NASA managers shall determine their activity's commercial potential and develop a Technology Commercialization Plan and strategy for achieving that potential in accordance with requirements stated in [NPR 7120.5](#), Sections 2 and 3 (see Chapter 3 of this document).
- b. End-to-end customer involvement speeds the successful commercialization of NASA technology. NASA program/project managers shall identify in their technology commercialization plans, partners who can work collaboratively to achieve successful technology commercialization (see [NPR 7120.5](#), Sections 2 and 3; Chapter 5 of this document).
- c. NASA program/project managers shall ensure that technology commercialization objectives are addressed, as appropriate, in procurement contracts, grants, cooperative agreements and Space Act Agreements for which there is commercial potential (see Appendix D for guidance).
- d. NASA program/project managers shall report success stories that have resulted from partnerships identified in Paragraph 1.3.2c (see Chapter 6 of this document).

e. NASA program/project managers shall use technology commercialization metrics and performance indicators in evaluating their technology commercialization efforts. These metrics and indicators will be collected and incorporated in the Program Management Council review process for those activities under [NPR 7120.5](#) (see Chapter 7 of this document).

f. NASA program/project managers shall ensure that the planned technology exchange and partnership agreements comply with all laws and regulations regarding export control and the transfer of sensitive proprietary technologies.

1.3.3 This document defines a process for NASA program/project managers (heretofore called activity managers) to use in formulating, approving, implementing, and evaluating their technology commercialization activities. It is intended to be flexible and adaptable to the many types of activities that NASA conducts. NASA managers are challenged to use their expertise and apply innovative techniques to ensure that the technological assets (technologies, innovations, facilities and expertise) from their activities have maximum commercial application.

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